

Expeditionary Maneuver Warfare and Strategic Sealift: Ways to Improve the Marines' Expeditionary Capability

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*Expeditionary Maneuver Warfare and Strategic Sealift:  
Ways to Improve the Marines' Expeditionary Capability*

**By**

**Jerome E. Driscoll  
LtCol, United States Marine Corps**

**To**

**Dr. Gordon Rudd**

**A paper submitted in partial satisfaction of the requirement of the School of Advanced Warfighting writing program.**

**The contents of this paper reflect my own personal views and are not necessarily endorsed by the School of Advanced Warfighting, the Marine Corps University, or the Department of the Navy.**

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## EXECUTIVE SUMMARY

**Title:** Expeditionary Maneuver Warfare and Strategic Sealift: Ways to Improve the Marines' Expeditionary Capability

**Author:** Jerome E. Driscoll

**Thesis:** To be a relevant force to a Joint Force Commander in the future, the Marine Corps must improve upon the Corps' deployment and sustainment capabilities in expeditionary operations.

**Discussion:** In today's changing strategic environment, the strategic mobility of the United States will increasingly depend upon more capable and responsive sealift assets. For the Marine Corps, enhanced strategic sealift will make the Corps less reliant on strategic airlift and more relevant to a Joint Force Commander. A specific area where the Marines can improve their capability is Intra-Theater lift. The Marines can give the Joint Force Commander increased options for employment because deployment of forces and their sustainment is due to faster sealift technology and vessels, which means strategic airlift carries less of a burden. The way the Marines in working with the Navy can take advantage of the developing technologies is not necessarily through the purchase of these high-speed ships, but through limited purchase and a leasing program with commercial interests that already own and operate these vessels. Such ships, collectively known as Fast Ferries can sustain speeds of 40 knots and carry between 500 and 750 personnel or 380 tons of cargo over a distance of 1000 nautical miles. While ship capabilities differ somewhat, the value of the vessels as a force multiplier is clear.

**Conclusion:** High-speed sealift in combination with other commercial sealift assets can make strategic sealift a more responsive to a Joint Force Commander. For the Marine Corps and the Navy, taking advantage of this current technology will make the Marines a more relevant and capable force. Intra-Theater sealift supports Expeditionary Maneuver Warfare and Marine Corps Strategy 21 with the added benefit of not requiring development from the drawing board. High-speed sealift is a possible economic solution to help the Marine Corps remain as the nation's force in readiness.

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The vision statement of the Marine Corps is the blueprint to guide the development of the Corps into this new century. As the "expeditionary force in readiness", the Marines will employ Strategy 21 and Expeditionary Maneuver Warfare (EMW) to continue expanding and refining Marine Corps skills and capabilities.<sup>1</sup> This effort will be challenged in a world characterized by increased asymmetric threats, area denial, and operations in immature theaters. The Marine Corps addresses these issues in the Marines' vision statement, Strategy 21, and EMW.

"As the premier expeditionary total force in readiness", the Marine Corps will be tailored to answer the nation's call at home or abroad. Opportunities and challenges in the world's littoral regions will increase America's reliance on the continuous forward presence and sustainable maritime power projection of Naval Expeditionary Forces.<sup>2</sup>

There should be no doubt that Marines possess an enviable record of successful operations over hostile shores, but the new strategic environment calls for continued innovation to remain successful in the future. The Marine Corps must be able to deploy credible and capable forces to support contingency operations on short notice and sustain these forces once committed ashore. *To be a relevant force to a Joint Force Commander (JFC) in the future, the Marine Corps must improve upon the Corps' deployment and sustainment capabilities in expeditionary operations.* The focus of this paper is to consider ways the Marines can improve in this area.

### **The Marine Corp Vision**

The United States military as a whole has increased focus on the requirement to quickly respond to a crisis overseas on short notice. In addition, the deployed force, most likely a joint operation, must be able to execute a range of missions once in theater. The

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<sup>1</sup> Almar 042/00, 16 November 2000. Marine Corps Strategy 21, Headquarters, United States Marine Corps, Washington D.C. November, 2000

<sup>2</sup> Almar 042/00 p.2

new strategic environment forces the military to evaluate current capabilities in light of this new situation. Key to this new environment is the growth of operations in immature theaters where U.S. forces will operate. Simply stated, an immature theater lacks the infrastructure required to support a joint force.<sup>3</sup> To this situation, a JFC must also consider the possibility of no host nation support. This kind of area denial can be the result of many variables, but the end state is still the same. The commander must solve the issue of where he will base his support structure. The vision statement also reinforces the capability of the Marines to prosecute forcible entry operations, a hallmark of the Corps. The interrelationship between these three concepts, forward presence, sustainment, and forcible entry is vital. Degradation in one of these areas adversely affects the other two. If forcible entry is to be successful, sustainment of these forces must be planned. To understand why, one needs to understand the Marine Corps definition of expeditionary.

The Marine Corps defines expeditionary forces as, "an agile and flexible force organized to accomplish a broad range of military objectives in a foreign country or region. Such a force must be able to deploy rapidly, enter the objective area through forcible means, sustain itself for an extended period of time, withdraw quickly and reconstitute rapidly to execute follow on missions".<sup>4</sup> This definition states a task organized Marine force can rapidly deploy to a crisis, conduct combat operations upon arrival in an immature theater in support of JFC and stand by for additional tasking. How is this expeditionary capability demonstrated now?

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<sup>3</sup> Joint Military Operations Department, Operational Functions, Naval Warfare College 4103, U.S. Naval War College, Newport RI: August 1996, p. 30

<sup>4</sup> Expeditionary Maneuver Warfare: A Capstone Concept for Power Projection across the Spectrum of Conflict. (Draft) Headquarters, United States Marine Corps. Washington D.C. 3 November, 2000 p. 8

Marine forces are forward deployed in several theaters in different ways. The mainstay of forward Marine presence is the Marine Expeditionary Unit (Special Operations Capable) (MEU (SOC)). This force is the base unit aboard amphibious ships upon which the Marine Corps can build the Marine Expeditionary Brigade or the Marine Expeditionary Force, task organized Marine forces ready to serve a JFC in a crisis. Marines are also forward deployed to Okinawa and have command elements in other major theaters. This structure supports rapid deployment operations and planning for sustainment of committed forces. There are limits to these forward deployed units.

Sustainment is one limitation. A MEU(SOC) has aboard amphibious ships fifteen days sustainment in the event the MEU is committed to contingency operations. Additional combat support must be brought into the theater. A Marine Brigade has thirty days sustainment and a Marine Expeditionary Force has sixty days sustainment. These numbers can also change once a situation is developed where additional support may be required at an earlier or later date. The means to transport additional support can be either by air or surface borne vehicles depending on the deployment planning and involvement of the other services. Extended contingency operations is a fact of life that should lead military planners to utilize a combination of airlift and sealift support for sustainment of committed forces. Maritime pre-positioning and strategic airlift should provide that kind of support before the end of a fifteen-day period.

A Marine Expeditionary Brigade or Force also requires time to build up that force and deploy the Marines in theater. Strategy 21 and EMW emphasize the Naval character of the Marine Corps and stress the importance of using the oceans of the world for maneuver space. For planners, this means the Navy will continue to provide strategic

sealift for Marine forces. The Navy and Marine team symbolizes the EMW principle of "Naval forces operating independent of Host Nation approval and capable of forcible entry operations from the sea".<sup>5</sup> Since the relative speed of surface ships has remained constant over the last century, the speed at which amphibious ships arrive on scene has also remained constant.<sup>6</sup> How will the Marine Corps, with the Navy support the forces of a MEU once these units are committed? What are the options? The obvious answer is strategic airlift coupled with strategic sealift to quickly transport the follow on forces needed for an operation. To understand why these options are problematic for Marine planners, a review of Army and Air Force planning for the future is necessary.

### **Army and Air Force Operational Initiatives**

After the Gulf War and operations in the former republic of Yugoslavia, the Air Force realized a review of the vision of their service was required. Budget constraints, increased operational and personnel tempo, and the need to modernize the force led Air Force strategic planners write Vision 2020.<sup>7</sup> The Air Force vision stresses the expeditionary capability of the Air Force to deploy anywhere in the world on short notice with a force package tailored to the needs of a JFC. The concept should sound familiar to Marine planners. The centerpiece of this vision is the establishment of ten Aerospace Expeditionary Forces (AEF's). These AEFs, two of which are either forward deployed or on alert, are self-contained forces that can conduct operations after a minimal time in theater. The initial AEF is just the enabler for possible follow-on forces if reinforcement is required. In this situation, the Air Force will also focus its efforts and refine its

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<sup>5</sup> Expeditionary Maneuver Warfare: A Capstone Concept for Power Projection across the Spectrum of Conflict. (Draft) Headquarters, United States Marine Corps. Washington D.C. 3 November 00. p. 10

<sup>6</sup> O'Hanlon, Michael. *Technological Change and the Future of Warfare*. Brookings Institution Press. Washington D.C. 2000 p. 69

<sup>7</sup> Air Force Vision 2020, Department of the Air Force, Washington D.C.



capability to rapidly deploy up to five AEF's in a fifteen-day period.<sup>8</sup> To make this capability work, strategic airlift represents the backbone of the support required to deploy these forces. The Air Force will seek to rationalize the forces needed to maximize their efficiency and so reduce the requirement for forces in theater because these planners also realized the mission may take them to an immature theater. And because of the aging fleet of strategic airlift platforms, Air Force planners will try to reduce the amount of airlift required. The number of sorties will still be substantial.

Some Air Force support packages will arrive in theater via sealift but the decision to utilize these support packages will most likely be tied to the expected duration of the operation and what other forces require strategic airlift to bring forces in theater. Undoubtedly, surface support for transportation of Air Force supplies will not degrade Air Force operational capabilities. With the advent of the global attack and precision engagement concepts of the Air Force's vision, a great deal of capability will come directly from the United States to the theater of operations. These forces will be able to engage targets and return to the United States after the end of the mission. This capability may lessen the need for strategic lift via surface means, but may also make those fly-in echelon forces more critical to mission success. Marine planners must keep the Air Force vision in mind if their planned force structure requires significant airlift to arrive in theater.

The Army's plan for the future has more flexibility planned into their model because the size of the Army requires more than one mode of deployment. Strategic airlift is an important part of the Army's planning, but the Army also owns and operates a substantial fleet of watercraft designed to support contingency operations. Much like the

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<sup>8</sup> Air Force Vision 2020, Department of the Air Force, Washington D.C. p. 5

Marine Corps, the Army has a maritime prepositioning fleet of logistic vessels on standby to support Army forces committed to contingency operations. In the future, the Army intends to restructure its watercraft program to make this force more responsive to the changing strategic environment.

The framework for this restructuring plan is the Army's watercraft restructuring concept plan that will support the vision of the Chief of Staff of the Army (CSA).<sup>9</sup> As is the case with the Air Force, this concept is the result of the need to respond to the changing strategic environment and the resultant new range of contingencies. Major principles that underlay the concept are the needs to increase strategic responsiveness, deploy significant force structure in a short amount of time and do so in immature theaters with little infrastructure. The Army already possesses a limited capability to achieve these objectives set forth by the CSA in the form of an MPF force structure, but there now is a need to modernize. How the Army plans to restructure this watercraft concept is of direct interest to the Marine Corps.

To better support the change in the Army's force structure, the watercraft concept will focus effort in three areas. Research and development will seek to improve the intra-theater lift of the Army's watercraft fleet, improve the Joint Logistics Over the Sea (J/LOTS) program, and strengthen port-opening capabilities. The aim of this effort is to improve the Army's ability to bring force to bear in theater without over-dependence on a host nation structure. Port operations are always important to the Army, as the size of the forces will often require a secure port facility for staging and throughput of materiel. However, in lieu of a port, the J/LOTS system and intra-theater lift are designed to respond to the needs of committed forces.

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<sup>9</sup> "Army Watercraft Restructuring Concept Plan". United States Army Support Command brief. 22 Jan 01

The plan for the intra-theater lift using a sea-borne supply route is to forward deploy such vessels to strategic points around the world, possibly locating them with Army prepositioned maritime vessels. The intra-theater lift would be capable of projecting combat power to a designated point from either a Joint/Intermediate Staging Base (J/ISB) or possibly from a J/LOTS location established for those forces.<sup>10</sup> Employed in multiples, the Theater Support Vessels (TSV) would be the mainstay for the Army with the capability of carrying 350 combat-loaded troops or a combat cargo load equivalent to 14-17 M1A1 tanks (range dependent). With a self-deploying range of 4726 nautical miles at 40 knots, the TSV is a tremendous force multiplier. From the point of view of a planner, the range of options for flowing in forces to a theater also multiplies. Designated forces can now deploy directly to the theater aboard strategic airlift, deploy to an intermediate staging base for transfer to the objective area via TSV, or actually arrive in theater via a TSV or other standard surface transport. A JFC now has significant options when deciding on the type of force package he needs to meet a contingency.

With this basic understanding of Marine Corps Strategy 21 and EMW now standing side by side with the concepts of the other armed services, how will the Marine Corps now develop the vision of its future and be a relevant force to a JFC? Are there specific areas the Marines, with the Navy, should now focus upon and are there transportation concepts that will support efforts in those areas? As with many developing programs, there appears to be intermediate answers as well as long-range solutions.

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<sup>10</sup> "Army Watercraft Restructuring Concept Plan". United States Army Support Command brief. 22 Jan 01 & Theater Support Vessel Concept Paper, Office of Net Assessment, Department of State

### **Where can the Marine Corps improve?**

The purpose of the discussion above is to highlight two areas where the visions of the Army and Air Force can affect the Corps' own vision of the future. If an AEF is assigned to support a JFC as part of a larger joint operation, strategic airlift will be critical to the deployment of those Air Force units to the theater. Presumably, designated Army units would require a combination of strategic airlift as well as surface transport. When the TSV comes on line, the Army will then be able to deploy forces to a theater or within a theater with a greatly reduced gap in the time of arrival of those forces. After the Marines arrive in the objective area aboard amphibious ships, assuming that force is a ME.U, how will additional Marine units arrive in theater? After the arrival of Marine fixed wing aviation units, will additional Marines be decisive for a JFC if these forces arrive thirty days later? Of greater importance to a Joint Force Commander may be how the Marines will composite their forces when all units arrive in theater and force closure is complete. Doctrine in this area is under development, but the relationship between the command and control of Marine forces and deployment, assembly, and sustainment is central to the Marine component commander and the JFC. Arguably, considering these issues can help Marine planners find ways to improve this timeline and improve the value of the Marines. One key is to improve the Marine concept of prepositioning and the Maritime Prepositioning Forces (MPF).

The Marine Corps concept paper, "MPF - 2010", signed by the former Commandant, General Krulak, is currently the framework from which future concepts of and answers to sealift issues will come.<sup>11</sup> A central concept of this document calls for

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<sup>11</sup> MPF-20 10: MPF 2010 and Beyond. Marine Corps Combat Development Command. 30 December, 1997

improved force closure where the maritime prepositioning force can assemble at sea. The assigned Marine force package would arrive at the MPF squadron of ships and "marry up" with their gear for transit to the objective area. The MPF squadron would still be at sea, a safe distance from the objective area with other assets designated to transport those forces ashore. Two issues arise here for the Marines that can be addressed.

First, if strategic airlift is not available to the Marines in the quantity needed to fly all forces to the theater, presumably available sealift will be the mode of transportation. The developing technology that will dramatically increase the speed of certain types of surface ships becomes a central issue for the Marines. Additionally, the Marines and the U.S. military require ships of greater capacity with the same relative speed. The actual speed of surface ships, thirty knots, has not increased appreciably over the last one hundred years.<sup>12</sup> But not all ships of the Navy steam at that speed. Amphibious ships and container ships of the type that support MPF operations would do well to sustain speeds of thirty knots over great distances without the fear of malfunction.

The same commercial interests developing the smaller but faster cargo type vessels, like the TSV, should also benefit from the building of larger models as part of a joint Navy/Marine Corps effort. The INCAT Corporation has developed a passenger ship with a sustained speed of 40 knots that can cross the Atlantic Ocean in three days or less.<sup>13</sup> The commercial applications for a ship with this capability can also lead to continued development and enhanced performance. Through the Voluntary Intermodal Sealift Agreement (VISA), these ships become part of the amphibious Navy during a

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<sup>12</sup> O'Hanlon, Michael. *Technological Change and the Future of Warfare*. Brookings Institution Press. Washington D.C. 2000 p.69

<sup>13</sup> Owen Spivey, "High-Speed Sealift: Deployment Support for the Future," *Army Logistician*, January-February 1999, 1.

contingency operation or possibly even an exercise. This is one possibility. The Navy is part of the project development but does not necessarily purchase a fleet of ships.

However, at \$47.5 million per vessel, a limited purchase of ships is worth considering.<sup>14</sup>

A MEB force that sails at forty knots with the Navy to join a committed MEU as the advance elements of a MEF can increase the tactical options of a MEF commander and JFC. During a time of tighter budgets, a joint venture with the private sector can help rationalize the cost and keep the total price down.

The next part of this issue deals with the transport of forces after the link-up with the cargo aboard the MPF. Much like the Army's watercraft concept plan, if ground forces assemble at sea for movement ashore, there is a "gap" that exists from the assembly point to objective. For initial assault waves to flow into the objective area, the Marine Corps can strike from amphibious ships at sea to an objective utilizing the Landing Craft Air Cushion (LCAC), the Advanced Assault Amphibian Vehicle (AAAV), and in the future, the MV-22 Osprey tilt rotor aircraft for these operations. The Marines should complement these assault assets with high-speed transport assets. The commander ashore as well as a JFC may need to insert a greater number of Marines quickly to take advantage of a fleeting opportunity. There is an option other than the TSV that the Marines should consider for development and lease or purchase.

During operations in East Timor, the Royal Australian Navy recently employed the services of the *Jervis Bay*, a concept based high-speed catamaran.<sup>15</sup> This vessel originally developed for the private sector to provide a type of high-speed ferry service, proved its value in military applications. The *Jervis Bay* travels at speed up to 43 knots

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<sup>14</sup> Owen Spivey, "High-Speed Sealift: Deployment Support for the Future," *Army Logistician*, January-February 1999, 1.

<sup>15</sup> Holzer, Robert. *U.S. Navy Eyes Catamaran for Speed, Lift*. Defense News. 30 October, 2000

and is capable of carrying 600 combat loaded Marines or 380 tons of cargo with a combat radius of 1000 nautical miles (nm).<sup>16</sup> A similar vessel with comparable capabilities is the Scandinavian designed *Stena*. This fast ferry can carry 1500 personnel, approximately 1200 tons of cargo at 40 knots over 476 nm.<sup>17</sup> Even though these ships are designed as fast ferries and not open ocean vessels, the commercial success may mean continued increases in technology and capability. The possibilities of these catamarans as force multipliers are immense. The shallow draft, helicopter capable catamaran can link the expeditionary support site with the Marines who are falling in on their gear with the MPF and provide quick transportation ashore. With a MEB sailing into theater, this planning factor allows the Navy to support the MEB and remain at sea to plan the next maneuver. The cargo capacity means the planners can specify the exact combat support gear to send ashore and then they have the means to quickly back load, reducing the Marines footprint and vulnerability to attack.

The situation also exists where the expeditionary support site may be across a body of water, but located on land. For example, to support an operation in the former Yugoslavia, an expeditionary support site was located on the east coast of Italy. With a vessel like the *Jervis Bay*, the Navy has the option of scaling back its forces at sea to reduce the threat of attack and the distance across the Adriatic Sea is less of an obstacle to cross when a ship can cover the distance in two hours. Unlike an LCAC, the catamaran can withstand higher sea states when carrying cargo. Tactical air assets can be used more efficiently to support operations in the objective area. When the seaward

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<sup>16</sup> BG Charlie Fletcher, Director of Force Projection&Distribution. Strategic Responsiveness Study. 12 Oct 2000

<sup>17</sup> Stena Corporation. "Fact Sheet," [URL:<loganswell.u-net.com/Galloway/Stena\\_HSS.html>](http://loganswell.u-net.com/Galloway/Stena_HSS.html). Accessed 22 April, 2001

portion of a Joint Operations Area is secure, the catamaran is obviously a better choice for combat service support efforts. An AAAV will be required until that time. As stated above, this capability also meets the requirements of MPF 2010, Strategy 21, and EMW because the catamaran can rapidly return forces back to the expeditionary support site, which supports reconstitution of forces at sea and preparation for follow on tactical mission.

Another way the catamaran can increase the operational flexibility of the Marines and the JFC is the location of assembly of forces and support buildup. To this point, the discussion focused on the assembly of forces and supplies at sea for movement ashore. With the high-speed vessel supporting operations, the Marines, Navy and JFC can now consider staging at a base with an adjacent airfield but is still located beyond the immediate reach of the objective area. A critical decision for any operation is where to stage follow-on forces for assembly and commitment to the objective area. With a vessel like the *Jervis Bay*, a remote land based support site is now possible because the means to quickly move those forces in theater now exist. A solid base of operations, like England and the Philippines during WWII, can be decisive. With this new sealift capability, the Marine and JFC can now consider staging support to increase the responsiveness of that support for committed forces. The JFC can have a land base support operation with an at-sea intermediate support site for forces ashore. This situation may offset possible threats to the forces afloat by making these forces a smaller target and somewhat easier to protect. Also, given an adequate supply of strategic airlift, the Marines may soon fly-in additional forces to such an expeditionary site and quickly bring those forces to bear on the objective. Again, the JFC has options for planning his operation.



The value of the *Jervis Bay* was amply demonstrated during operations in East Timor. "This is not Buck Rogers; the technologies are in use," said retired U.S. Vice Admiral Bat Laplante, former head of logistics for the Pentagon's Joint Staff. "This is going to come, it is just a matter of time. But it is time to get serious about what is possible and what can be done."<sup>18</sup> What also requires emphasis here is the fact that the Australians leased the *Jervis Bay* for this operation. A cooperative effort like this one is a way the Marines and Navy can look to develop new capabilities in areas where there is obvious commercial value. High-speed hydrofoils are another type of craft that can be researched in the same way. To satisfy this gap in intra-theater lift, the Navy may consider the purchase of a small number of vessels with additional vessels being available through leasing from commercial owners. This effort may keep costs of the program down and allow for cooperation between the Navy/Marines and the commercial owners of the additional vessels. When the Navy commits the catamarans on hand for an operation, this action acts like a trigger mechanism to alert the commercial owner of the possibility of request to lease additional catamarans. The adverse affect on the commercial concern is reduced.

### **Commercial Opportunities**

The cooperation between the business community and the Navy/Marine Corps and military in general is critical. Opportunities exist where Marine planners can build on concepts developed with the airline and maritime industry to meet deployment needs in the future. One cannot assume that commercial assets will be automatically available for use during a crisis. But given broad contacts and discussions on these issues with counterparts in the business community, Navy/Marine planners have a start. An example

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<sup>18</sup>Holzer, Robert. *U.S. Navy Eyes Catamaran for Speed Lift*. Defense News. 30 October, 2000

here would be the conference held in December 2000 hosted by Defense Week.<sup>19</sup> The conference looked at the state of strategic military airlift how demands in the future for strategic airlift would be met. The conference attendees agreed that the Civilian Reserve Aircraft Fleet (CRAFT) might not be capable to respond to a major contingency or multiple crises in the future.

One possible solution would be to increase the number of commercial jetliners converted to military use or increase the number of jetliners leased for military use. The obvious reasoning behind this is the cost of producing a large fleet of strictly strategic lift military aircraft. Unlike jet fighters that have a demand in overseas markets, there is little demand beyond the U.S. for large military cargo aircraft. An example today of this type of either conversion or leasing situation is Federal Express. With a guarantee of overnight delivery, the Marine planner can imagine the opportunity to transport Marine forces to an expeditionary support site for movement in theater.

Because the United States is a maritime power, the requirement for strategic sealift should increase in the future. Opportunities exist in the private sector that would negate the need to build a vast fleet of military cargo ships. Commercial cruise line ships, while not possessing great speed, possess great capacity. These ships could also be leased for short periods of time to transport follow on forces to a theater. Cruise line ships are self contained, self sustaining operations that can house, feed, and keep clean a large number of personnel. The British use of commercial cruise ships during the Falkland Islands War proved the usefulness of these assets. If these ships require a port facility to offload cargo, the J/LOTS will have limited capability for that mission as well

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<sup>19</sup> "World Military Airlift Demand in the Next Decade." Brief given by Mr. Richard Aboulafia, Teal Group Corporation. December, 2000

as a land based expeditionary site where cargo moves into theater via a catamaran. These ships now remain as support vessels for a variety of missions, i.e. medical, dental, rest and refit of units, and other basic logistic needs. These ships can retain their maritime crews as needed and be augmented with additional Navy personnel. What this option represents to a JFC is another force multiplier where he can maintain assets out of harm's way and still have the means to quickly move personnel and material between supports sites and objective areas.

### **Conclusion**

As the premier force in readiness capable of forcible entry operations against hostile shores, the Marine Corps in concert with the Navy must continue to improve its deployment capability and options to bring support into theater if the Marines are to remain that premier force. After the commitment of a MEU, the area where critical work must be accomplished is the flow of additional forces in theater. The demand on strategic military airlift will be heavy regardless of the military branch supported because the airlift fleet is aging and being replaced slowly. The changing strategic environment may result in more operations in immature theaters and greater reliance on support operations at sea or from distant intermediate support sites. Employing EMW, these circumstances should play into the hands of Marine planners who constantly consider how to use the oceans as maneuver space. Appendix A shows how faster ships can make a difference. The employment of faster container ships, the purchase or leasing of fast catamarans or like vessels, and the integration of commercial air and sea assets into the execution of an operation are ways to enhance the oceans as maneuver space. As stated by retired Admiral Laplante, the time to get serious about these options is now.

## Atlantic and Pacific Ocean Crossing Times

<u>Vessel</u>	<u>Atlantic Ocean</u>	<u>Pacific Ocean</u>
SL-7 Fast Sealift Ship	T=3,000nm/23 knots (a) T=5 Days, 11 Hrs	T=8,000/23 knots T=14 Days, 12 Hrs
Passenger Liner United States	T=3,000nm/35.59 knots (b) T=3 Days, 10 Hrs	T=8,000/35.59 knots T=9 Days, 4 Hrs
INCAT 120m	T=3,000nm/50 knots T=2 Days, 12 Hrs	T=8,000/50 knots (c) T=6 Days, 16 Hrs
Future Fast Ferries	T=3,000nm/100 knots T=1 Day, 6 Hrs	T=8,000/100 knots T=3 Days, 6 Hrs
FASTSHIP	T=3,000nm/40 knots T=3 Days, 3 Hrs	T=8,000/40 knots T=8 Days, 8 Hrs
Litton (SES)	T=3,000nm/63 knots T=2 Days	T=8,000/63 knots T=5 Days, 7 Hrs

Notes:

FORMULA: Time = Distance / Speed

Atlantic Ocean distance approximated at 3,000 nautical miles

Pacific Ocean distance approximated at 8,000 nautical miles.

- a. Although advertised as achieving speeds of 33 knots, the first wave of SL-7 FSS during DS/DS achieved sustained speeds of 23 knots.
- b. Although built to achieve a calculated speed of 38 knots, the passenger liner *United States*' fastest transatlantic journey achieved a sustained speed of 35.59 knots.
- c. Carrying its maximum payload of 1,200 tons, the INCAT 120-meter vessel has a projected range of 4,000nm. Therefore, it would require refueling during crossing. Carrying 600 tons, the vessel has a projected range of 8,000nm.

Appendix A

\* Reprinted with the permission of Maj Jon K. Lowrey, USMC. Unpublished paper; *High Speed Sealift: The Future of Naval Ground Based Force Projection and Strategic Mobility*. 26 May 2001

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